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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/690,840	10/23/2003	Hitomi Ushitani	0756-7213	5406
31780	7590	03/25/2005	EXAMINER	
ERIC ROBINSON PMB 955 21010 SOUTHBANK ST. POTOMAC FALLS, VA 20165			LEE, GRANVILL D	
			ART UNIT	PAPER NUMBER
			2891	

DATE MAILED: 03/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

**Office Action Summary**

Application No.

10/690,840

Applicant(s)

HITOMI

Examiner

Granvill D. Lee, Jr

Art Unit

2825

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 December 2004.  
 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) ☒ Claim(s) 2,4-11,13 and 15-19 is/are allowed.  
 6) ☒ Claim(s) 1,3,12,14,20 and 22 is/are rejected.  
 7) ☒ Claim(s) 20-27 is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☒ All b) ☐ Some \* c) ☐ None of:  
 1. ☒ Certified copies of the priority documents have been received.  
 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
 \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date 12/20/2004.  
 4) ☐ Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.  
 5) ☐ Notice of Informal Patent Application (PTO-152)  
 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### **Claim Objections**

Claims 20-27 are objected to because of the following informalities:

Claims that suggest "an area of substrate no less than 1 square meter" cannot be substantiated by the specification. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1,3,12,14, 20 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al. (US Pat. 6,858,480).

In view of these claims (esp. clms.1 and 3), Nakamura et al. discloses a method for manufacturing a semiconductor device (Title) comprising the steps of forming a semiconductor layer (Fig. 2c #109) over a substrate (Fig. 1a#101), forming a mask comprising a resist (Fig. 3b #210-215) over the semiconductor to overlap with a portion of the semiconductor (See Fig. 3b), and adding an

impurity element (Col. 17 lines 42-57) to the semiconductor in accordance with the mask by a doping method (Col. 17 lines 42-57). Nakamura et al suggests that the mask used is heated (Col. 14 lines 49-Col. 14 line 30) to assist (CIm. 3) with doping with a gas. Nakamura et al. further shows an area of the mask (Fig. 31a #1629+1630+1631+1632) that is smaller than that of a mask (Fig. 31b #1651+1652+1653), which has openings only in an doped impurity element, yet Nakamura et al. fails to suggest that the mask is used in an adjusting margin over the semiconductor. However, Nakamura et al. still mentions that impurity regions are made in a self-alignment manner (Col. 34 lines 3-16).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to consider the self-alignment method of Nakamura with the idea of using a method that best considers or minimizes misalignment possibilities. Because self-alignment methods uses extensions or overlapping regions for gates, drains etc., when normal alignment is poor these regions still make the necessary contacts (Col. 33 line 50-Col. 34 line 15), and adjusting margins are not needed as stated in claims 1 and 3.

In view of claims 12 and 14, Nakamura et al. suggest that the device method is applicable to display devices (Col. 1 lines 25-30).

In view of claims 20 and 22, Nakamura et al. uses a substrate with an electrode of about 12.5 cm square (Col. 16 lines 60-65).

***Allowable Subject Matter***

Claims 2, 4-11, 13 and 15-19 are allowable.

Claims 20-27 are objected to as being dependent upon an rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance: The prior art of record fails to explicitly suggest or teach that an area of the mask as a percentage of the substrate.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Contact Information***

Any inquiry concerning this communication or earlier communications for the examiner should be directed to Granvill Lee whose telephone number is (571) 272-1897. The examiner can be normally reached on Monday thru Friday from 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are not successful, the examiner's supervisor, Bill Baumeister can be reached on (571) 272-1722. The fax phone number for this group is (703) 872-9306.

Art Unit: 2825

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Examiner  
Granvill Lee  
Art Unit 2829

G1  
3/04/05

  
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